

### **REMARKS**

Claims 1-2, 7-10, 14-20 have been rejected. Claims 3-5 and 11-13 are objected to. Claims 1, 3, and 11 have been amended. Claim 2 has been deleted. Claim 42 has been added. Claims 1, 3-5, 7-20, and 42 are, therefore, presently pending in the application. Favorable reconsideration of the application in view of the following remarks is respectfully requested.

#### **Allowable Subject Matter**

Claims 3-5 and 11-13 have been objected to as being dependent upon a rejected base claim. The Examiner states, however, that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants thank the Examiner for the indication of allowable subject matter. Claim 11, from which 12 and 13 depend, has been rewritten in independent form including all of the limitations of the base claim and any intervening claims. Similarly, claim 3 has been newly written as claim 42, also in independent form, including all of the limitations of the base claim and any intervening claims. The remaining claim 3 has been amended as described below, in order to obtain patent protection of the invention reasonably beyond only developing agents.

#### **Rejection of Claim 1 under 35 USC § 112:**

Claim 1 has been rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regards as the invention. The Examiner states that the terms X' and Y' for the structure II are not defined.

Applicants thank the Examiner for pointing out a significant typographical error. It is respectfully submitted that the above amendment to claim 1 now defines the terms X' and Y' for the structure II in claim 1.

#### **Rejection of Claims 1-2, 7-10, and 14-20 under 35 USC § 112:**

Claims 1-2, 7-10, and 14-20 have been rejected under 35 USC § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had

possession of the claimed invention. The Examiner states that wet developable developing art such as conventional photographic art and dry silver material known as thermally developable material has been known as distinct art, and the ingredients useful in the photographic art may not be useful in the photothermographic or thermographic art. The Examiner further states that photothermographic material and thermographic material are distinct in term of its composition and its used in image formation. The Examiner also states that PUG presented in the specification such as coupler, development inhibitor, bleach accelerator, bleach inhibitor, inhibitor releasing developer, dye precursor, developing agent, silver ion fixing agent, electron transfer agent, silver halide solvent, halide complexing agent, reductone, image toner, pre-processing or post-processing image stabilizer, hardener, tanning agent, fogging agent, ultraviolet absorber, nucleating, chemical or spectral sensitizer, desensitizer, surfactant, or precursor are not useful in all photographic material, photothermographic material and thermographic material, and the additives which are useful in the photographic material are not useful in photothermographic or thermographic material. The Examiner alleges that the specification for instance fails to clearly describe as how to use the chemical sensitizer, spectral sensitizer, desensitizer precursor, pre-processing stabilizer, post-processing stabilizer, ultraviolet absorber or coupler in the thermographic material. The Examiner further alleges that the selection of photographic useful groups suitable for the photographic, photothermographic and thermographic material is not clearly described in the specification. The Examiner states the specification fails to describe the invention in such a way as to reasonably convey to one skilled in the relevant art, (i.e. photographic, photothermographic and thermographic), that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This rejection is respectfully traversed in part. Claim 1 has been amended to delete reference to thermographic materials. Therefore, the only PUG claimed with respect to thermographic materials is now limited to the developing agent of independent claims 11 and 42.

Claim 1 is now limited to the PUGs described in amended claim 1, namely the term PUG is now limited to a development inhibitor, bleach

accelerator, bleach inhibitor, inhibitor releasing developer, dye precursor, developing agent, silver ion fixing agent, electron transfer agent, silver halide solvent, silver halide complexing agent, reductone, image toner, pre-processing or post-processing image stabilizer, nucleator, or precursor thereof. Thus, the PUG of claim 1 is now limited, not only by its presence in an imaging layer of either a photographic or photothermographic element, but to a compound having one of the specifically listed uses or functions. Also, it will be noted that PUG is no longer defined to include (as in original claim 2) couplers, hardeners, tanning agents, fogging agents, ultraviolet radiation absorbers, chemical or spectral sensitizers, desensitizers, and surfactants, or precursors thereof. It is believed that this is a reasonable position, since Applicants have provided representative examples of a developing agent, a development inhibitor, and a bleach accelerator. It is respectfully submitted that the limited list of PUGs now recited in claim 1 would have utility in both the photothermographic and conventional photographic art.

**Rejection of Claims 1-2, 7-10, and 14-20 under 35 USC § 112:**

Claims 1-2, 7-10, and 14-20 have been rejected under 35 USC § 112, first paragraph, because the specification, while being enabling for blocked developer of formula (III) on page 16 wherein PUG is a developer for photographic, photothermographic and thermographic material, does not reasonably provide enablement for compound of formula in claim 1 having PUG within the meaning of photographic useful group in photothermographic and thermographic material. The Examiner states that the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The Examiner further states that the term "photographic useful group" has been known in the art as a group useful in the wet-developable material such as conventional photographic material, and the photothermographic and thermographic material has been known as heat sensitive material. The Examiner argues that PUG (photographically useful group) may limit use in a conventional silver halide photographic material, but not in a photothermographic or thermographic material. The Examiner states that it has

been known in the art that the additives useful in the photographic material are not useful in photothermographic material or thermographic material.

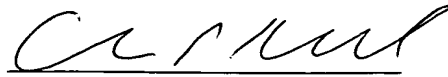
This rejection is respectfully traversed in part. As mentioned above, claim 1 has now been amended to delete reference to thermographic materials. Therefore, the only PUG claimed with respect to thermographic materials is now limited to the developing agent of independent claim 11 and 42. Also, claim 1 is now limited to PUGs that are either a development inhibitor, bleach accelerator, bleach inhibitor, inhibitor releasing developer, dye precursor, developing agent, silver ion fixing agent, electron transfer agent, silver halide solvent, silver halide complexing agent, reductone, image toner, pre-processing or post-processing image stabilizer, nucleator, or precursor thereof. Applicants have provided representative examples of a developing agent, a development inhibitor, and a bleach accelerator in the original application, on page 26 of the original application. Applicants submit that the skilled artisan is familiar with various PUGs in both the photothermographic and conventional photographic art, and that the limited list of PUGs recited in claim 1 are readily enabled. Applicants submit that the skilled artisan would be enabled to make the invention commensurate in scope with the presently amended claims.

It is respectfully requested that the above amendments to the claims be allowed entry, since they address 35 USC §112 issues, narrow the claims further, reduce issues, and do not necessitate further searching nor raise any issues of unobviousness.

It is believed that the foregoing is a complete response to the Office Action and that the claims are in condition for allowance. Favorable reconsideration and early passage to issue is therefore earnestly solicited.

Attached hereto is a marked up version of the changes made to the claims by the current amendment. The attached page(s) is captioned "Version With Markings To Show Changes Made."

Respectfully submitted,



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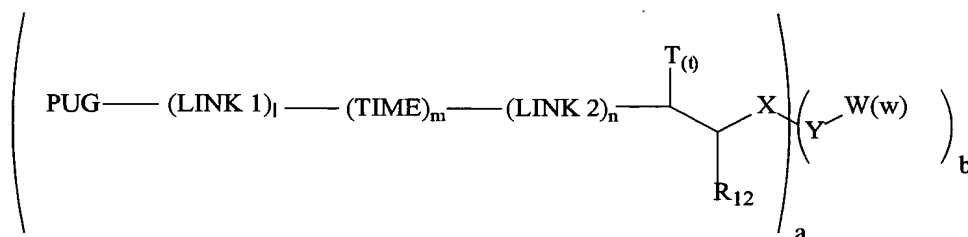
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Version With Markings To Show Changes Made

In the Claims:

Claims 1, 3, and 11 has been amended as set forth below:

1. (Twice amended) A photographic [,] or photothermographic [,or thermographic] imaging element comprising an imaging layer having associated therewith a compound of Structure I:



I

wherein:

PUG is a photographically useful group;

LINK 1 and LINK 2 are linking groups;

TIME is a timing group;

l is 0 or 1;

m is 0, 1, or 2;

n is 0 or 1;

Y is C, N, O or S;

X is a substituted or unsubstituted aryl group or an electron-withdrawing group;

W is hydrogen, halogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group, or W can combine with T or R<sub>12</sub> to form a ring, w is 0 to 3 when Y is C, w is 0-2 when Y is N, and w is 0-1 when Y is O or S, when w is 2, the two W groups can combine to form a ring, and when w is 3, two W groups can combine to form a ring or three W groups can combine to form an aryl group or a bicyclic substituent;

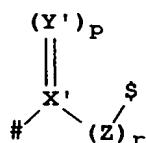
$R_{12}$  is hydrogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group or  $R_{12}$  can combine with T to form a ring;

T is a substituted or unsubstituted alkyl cycloalkyl, aryl or six-membered heterocyclic group, t is 0, 1, or 2, with the proviso that when X is a cyano or sulfonyl group t is 1 or 2, when t is 2 the two T groups can combine to form a ring;

a is 1 or when X is divalent a is 1 or 2; and

b is 1 when X is divalent and 0 when X is monovalent;

where LINK 1 and LINK 2 is independently of Structure II:



II

wherein

[X]  $X'$  represents carbon or sulfur;

[Y]  $Y'$  represents oxygen, sulfur or  $N-R_1$ , where  $R_1$  is substituted or unsubstituted alkyl or substituted or unsubstituted aryl;

p is 1 or 2;

Z represents carbon, oxygen or sulfur;

r is 0 or 1;

with the proviso that when X is carbon, both p and r are 1, when X is sulfur, Y is oxygen, p is 2 and r is 0;

# denotes the bond to PUG (for LINK 1) or TIME (for LINK 2):

\$ denotes the bond to TIME (for LINK 1) or  $T_{(0)}$  substituted carbon (for LINK 2); and

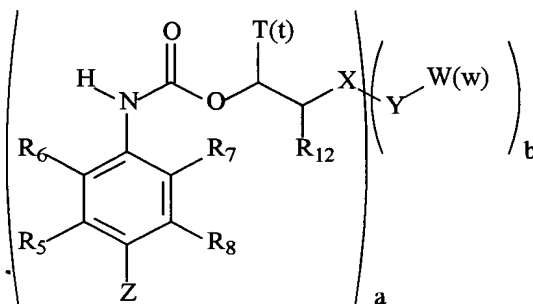
wherein PUG is a development inhibitor, bleach accelerator, bleach inhibitor, inhibitor releasing developer, dye precursor, developing agent, silver ion fixing agent, electron transfer agent, silver halide solvent, silver halide

complexing agent, reductone, image toner, pre-processing or post-processing image stabilizer, nucleator, or precursor thereof.

Please delete claim 2 without prejudice.

3. (Once Amended) An imaging element according to claim [2] 1, wherein PUG is a developer.

11. (Twice Amended.) A photographic, photothermographic, or thermographic imaging element [according to claim 1, wherein the compound of Structure I is] comprising an imaging layer having associated therewith a compound of Structure III:



III

wherein:

Z is OH or NR<sub>2</sub>R<sub>3</sub>, where R<sub>2</sub> and R<sub>3</sub> are independently hydrogen or a substituted or unsubstituted alkyl group or R<sub>2</sub> and R<sub>3</sub> are connected to form a ring;

R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> are independently hydrogen, halogen, hydroxy, amino, alkoxy, carbonamido, sulfonamido, alkylsulfonamido or alkyl, or R<sub>5</sub> can connect with R<sub>3</sub> or R<sub>6</sub> and/or R<sub>8</sub> can connect to R<sub>2</sub> or R<sub>7</sub> to form a ring;

T is a substituted or unsubstituted alkyl cycloalkyl, aryl or six-membered heterocyclic group, t is 0, 1, or 2, with the proviso that when X is a cyano or sulfonyl group, t is 1 or 2, when t is 2, the two T groups can combine to form a ring;



$R_{12}$  is hydrogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group or  $R_{12}$  can combine with T or W to form a ring;

X is a substituted or unsubstituted aryl group or an electron-withdrawing group;

Y is C, N, O or S;

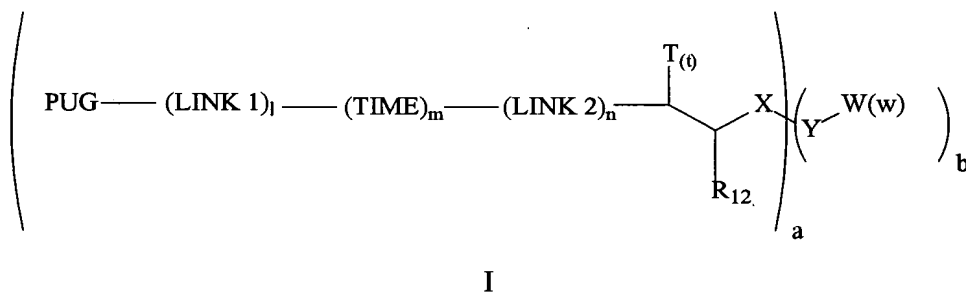
a is 1 when X is monovalent and 1 or 2 when X is divalent;

b is 0 when X is monovalent and 1 when X is divalent;

W is hydrogen, halogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group, or W can combine with T to form a ring, w is 0 to 3 when Y is C, w is 0-2 when Y is N, and w is 0-1 when Y is O or S, when w is 2, the two W groups can combine to form a ring, and when w is 3, two W groups can combine to form a ring or three W groups can combine to form an aryl group or a bicyclic substituent.--

Please add the following new claim 42:

42. (New Claim.) A photographic, photothermographic, or thermographic imaging element comprising an imaging layer having associated therewith a compound of Structure I:



wherein:

PUG is a developing agent;

LINK 1 and LINK 2 are linking groups;

TIME is a timing group;

l is 0 or 1;

m is 0, 1, or 2;

n is 0 or 1;

Y is C, N, O or S;

X is a substituted or unsubstituted aryl group or an electron-withdrawing group;

W is hydrogen, halogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group, or W can combine with T or R<sub>12</sub> to form a ring, w is 0 to 3 when Y is C, w is 0-2 when Y is N, and w is 0-1 when Y is O or S, when w is 2, the two W groups can combine to form a ring, and when w is 3, two W groups can combine to form a ring or three W groups can combine to form an aryl group or a bicyclic substituent;

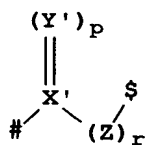
R<sub>12</sub> is hydrogen, or a substituted or unsubstituted alkyl, cycloalkyl, aryl or heterocyclic group or R<sub>12</sub> can combine with T to form a ring;

T is a substituted or unsubstituted alkyl cycloalkyl, aryl or six-membered heterocyclic group, t is 0, 1, or 2, with the proviso that when X is a cyano or sulfonyl group t is 1 or 2, when t is 2 the two T groups can combine to form a ring;

a is 1 or when X is divalent a is 1 or 2; and

b is 1 when X is divalent and 0 when X is monovalent;

where LINK 1 and LINK 2 is independently of Structure II:



II

wherein

X represents carbon or sulfur;

Y represents oxygen, sulfur or N-R<sub>1</sub>, where R<sub>1</sub> is substituted or unsubstituted alkyl or substituted or unsubstituted aryl;

p is 1 or 2;

Z represents carbon, oxygen or sulfur,

r is 0 or 1;

with the proviso that when X is carbon, both p and r are 1, when X is sulfur, Y is oxygen, p is 2 and r is 0;

# denotes the bond to PUG (for LINK 1) or TIME (for LINK 2):

\$ denotes the bond to TIME (for LINK 1) or T<sub>0</sub> substituted carbon (for LINK 2).